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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,443	02/26/2004	Steven E. Koenck	14425US02	7829
23446 7590 06/30/2010 MCANDREWS HELD & MALLOY, LTD 500 WEST MADISON STREET SUITE 3400 CHICAGO, IL 60661				
EXAMINER				
CHERY, DADY				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/787,443

Applicant(s)

KOENCK ET AL.

Examiner

DADY CHERY

Art Unit

2461

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

This is in response to an amendment/response filed on March 11th 2010.

No Claims have been amended.

Claims 32-49 have been cancelled.

No Claims have been added.

Claims 1 - 31 are currently pending.

Response to Arguments

Applicant's arguments filed March 11th 2010 have been fully considered but they are not persuasive.

In response to the Applicant's argument that the Tymes mobile units 15 and Tymes base stations (12, 13 and 14) are distinctly different devices, examiner now reads the claims mobile computing device on base 13 instead of mobile 15 as before.

With regard to claim 3, base station now interfaces with wire network 11 and a wireless network via RF 34 and/or RF 34a.

With regard to claim 4, base station 13 comprises RF 34a (col. 7, lines 2-4) for communication with other base units when necessary (col. 8, lines 26-31).

With regard to claim 10, col. 21, lines 24-55 of Tymes teaches responsive to out-of-range condition and communications between the base stations.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-4, 7, 9-13, 17-20, 24-27 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tymes (US Patent 5,157,687, hereinafter Tymes).

Regarding claims 1, 11, 18, 25 and 26, Tymes discloses a system for use in a communication network having a plurality of subnetworks (**Fig. 1, 11 which is subnetwork see Col. 6, lines 49 55 and RF subnetwork**), the system comprising:

A mobile computing device (**fig. 3, 13**) Comprising:

a base module (**13**) comprising a base processing unit (**30**) operable on data in accordance with a set of communication software routines (**Col.6, lines 63-68 , which recites CPU 30 access memory 31 according a set communication routines**); and

a communication processor (**13**) comprising: a first communication transceiver (**33**) comprising a first operating characteristic to conduct data communications on a first of the plurality of subnetworks (**Col. 6, lines 65-68, which recites transceiver 33 transmit and receive data to and from link 11 considered as a first subnetwork**); and a second communication transceiver (**34**) comprising a second operating characteristic to conduct data communications on a second of the plurality of subnetworks(**Col. 6, lines 66 – Col. 7, lines 5, which recites transceiver 34 conducts data communication on the RF network considered as the second subnetworks**), the second operating characteristic being different from the first operating characteristic and the second subnetwork being different from the first subnetwork (**Col. 6, lines 47 - 49 and Col. 8, lines 20 -31, which recites the first subnetwork a standard local area network which is different to second subnetwork which a wireless RF network**);

Tymes discloses the conversion of data received by the first and second communication transceivers to a format for processing by the base processing unit (30) in accordance with the set of communicating software routines and for converting data processed by the base processing unit (30) to a format for transmission by a selected one of the first and second communication transceivers, thereby isolating the base processing unit from differences between the first and second operating characteristics of the first and second communication transceivers.

In Tymes' system base station 13 receives data from the host computer via network 11 using adapter 33 and then has to convert the received data to RF format for transmission to the remote device 15 using RF transceiver 34 (**Col. 7, lines 60 -68, which convert data from RF to the protocol of network 11 and vice versa**); this is considered as the base processing unit and the first and second communication transceivers for converting data received by the first and second communication transceivers to a format for processing by the base processing unit in accordance with the set of communicating software routines and for converting data processed by the base processing unit to a format for transmission by a selected one of the first and second communication transceivers, thereby isolating the base processing unit from differences between the first and second operating characteristics of the first and second communication transceivers. Tymes further teaches the base station in the host device may be considered as a single device (**col. 8, lines 1 – 7**); which is substantially implies the processor (20) of the host computer is incorporate to the base station, therefore, coupled between the base processing unit and the first and second

communication transceivers for converting data received by the first and second communication transceivers to a format for processing by the base processing unit (**See Col. 7, lines 61 – Col. 8, lines 11**).

Even though Tymes does not explicitly teach a separate communication processor for performing the format conversion between the wire network 11 and RF network, such separate processor would efficiently perform the conversion function and relieve processor 30 from that duty, thus would speed up other tasks done by processor 30. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a separate processor of the host computer in the base station to efficiently convert data received by the first and second communication transceivers to a format for processing by the base processing unit in accordance with the set of communicating software routines and for converting data processed by the base processing unit to a format for transmission by a selected one of the first and second communication transceivers with the motivation to speed up the processing time in the base unit.

Regarding claims 2, 12 and 19, Tymes discloses the portable data collection terminal of claim 1 wherein the communication processor comprises:
a first processing unit (**Fig. 3, 33**) connected between the base processing unit and the first communication transceiver for converting data received by the first communication transceiver to a format for processing by the base processing unit in accordance with the set of communication software routines and for converting data processed by the base processing unit to a format for transmission by the first communication

transceiver and a second processing unit (**Fig. 3,34**) connected between the base processing unit and the second communication transceiver for converting data received by the second communication transceiver to a format for processing by the base processing unit in accordance with the set of communication software routines and for converting data processed by the base processing unit to a format for transmission by the second communication transceiver.

Regarding claims 3, 13, 20 and 27, Tymes discloses the system of claim 1 wherein the first communication transceiver operates in a wired subnetwork (network 11) and the second communication transceiver operates in a wireless subnetwork (**Fig. 1, wireless network between base station 13 and terminal 15 and other base stations**).

Regarding claims 4 and 35, Tymes discloses the system of claim 3 wherein the wireless subnetwork comprises a backup network in the event of a failure in the wired subnetwork (**Fig. 1, where the RF network between base station 14 and base station 13 is considered as the backup network**).

Regarding claim 5, Tymes discloses that network 11 may use protocol such as time slot sharing (TDM), Ethernet or token ring (col. 6, lines 48-62). Testing is old and well known in the art of time slot sharing, Ethernet or Token Ring. Since the claim uses the phrase "is operable to test...", the testing is not required for the claim. Only the ability to operate to test is required. Thus, since testing is Testing is old and well known in the art of time slot sharing, Ethernet or Token Ring, it would have been obvious to

one of ordinary skilled in the art to include network testing in the system of Tymes to make sure network 11 is working and enhance network transmission reliability.

Regarding claims 9, 17, 24 and 31, Tymes discloses the system of claim 1 wherein the communication processor further includes means for relaying communication received by one of its first and second communication transceivers for retransmission by the other of its second and first communications transceivers (**Col. 7, lines 63 – 66**)

Regarding claim 10, Tymes discloses In the communication network of claim 1 including a computer and a plurality of mobile of computing device (**Fig. 1,13**) each coupled to the plurality of subnetworks (**11, and RF networks**) and wherein at least one of the communication transceivers of each of the portable data collection terminals operates in a wireless subnetwork, the communication processor of each data collection terminal being responsive to an out-of- range condition for the respective portable data collection terminal to initiate data communications by its said one communication transceiver to another of the plurality of portable data collection terminals, the other of the data collection terminals relaying data communications between the computer and the first-named data collection terminal(**Col. 21, lines 24 - 55**).

5. Claims **8, 16, 23 and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tymes (US Patent 5,157,687, hereinafter Tymes) in view of Wang (5,765,027).

Regarding claims 8, 16, 23 and 30, Tymes does not teach that the communication module is housed in a PCMCIA card. However, Wang teaches that a communication module can be housed on a PCMCIA card for portability and expandability purposes. Thus, it would have been obvious to one of ordinary skilled in the art to apply Wang teaching of housing a communication module on a PCMCIA card with the motivation being to enhance portability and expandability.

6. Claims 6-7, 14-15, 21-22 and 28-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DADY CHERY whose telephone number is (571)270-1207. The examiner can normally be reached on Monday - Thursday 8 am - 4 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D. VU can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dady Chery/
Examiner, Art Unit 2416

/Huy D Vu/
Supervisory Patent Examiner, Art Unit 2461